National Aeronautics and Space Administration

DATA & APPLICATIONS ONLINE

Large Scale Biosphere-Atmosphere Experiment in Amazonia

Overview

The Large Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) is an international research initiative under the leadership of Brazil. The project focuses on the climatological, ecological, biogeochemical, and hydrological functions of Amazonia; the impact of land use change on these functions; and the interactions between Amazonia and the Earth System. LBA Ecology (LBA-ECO), the NASA component of LBA, supported field data collection between 1995 and 2005. The overarching LBA-ECO science question is: "How do tropical forest conversion, regrowth, and selective logging influence carbon storage, nutrient dynamics, trace gas fluxes, and the prospect for sustainable land use in Amazonia?"

Data

The NASA-designated long-term archive for ecological and biogeochemical data from field campaigns is the Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC). ORNL DAAC is one of the NASA Earth Observing System Data and Information System data centers, which provide a variety of interdisciplinary Earth System science data, information, services, and tools. The LBA Data and Information System (LBA-DIS) has been developed by the Instituto Nacional De Pesquisas Espaciais (INPE) and the Centro de Previsão de Tempo e Estudos Climáticos (CPTEC) and is a repository for all LBA information.

Project Highlights

• LBA-ECO has completed the field observation portions of the LBA campaign (Phases 1 and 2). LBA-ECO is currently in the Synthesis, Integration, and Modeling (Phase 3) phase of the campaign.

• The ORNL DAAC has archived 40 data sets from Phases 1 and 2 related to carbon dynamics, human dimensions, land use and land cover change, nutrient dynamics, physical climate, surface hydrology, water chemistry, and trace gases.

• LBA research activities have resulted in more than 500 publications, including 7 special issues. In addition, more than 240 new Ph.D. degrees have been granted in the U.S.A. and Brazil based on LBA research.

To learn more, go to http://daac.ornl.gov/LBA/lba.html

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